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Divergence through differential frequency: The grammaticalization of the Japanese connective *soredewa* 'now/then'

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HIGHLIGHTS

- Reduced and non-reduced variant forms of the Japanese connective *soredewa* experienced divergence.
- The reduced variants *dewa* and *jā* became specialized in pragmatic use.
- The non-reduced variants reversed their trends of change over time.
- The observed functional differentiations follow the Reducing and Autonomy Effects proposed by J. Bybee (2007).

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ABSTRACT

Based on an extensive analysis of Early Modern and Modern Japanese texts, the present study illustrates how the Japanese connective *soredewa* and its variants underwent semantic-pragmatic changes over time. More specifically, the quantitative evidence provided in this study reveals that the reduced and non-reduced forms of *soredewa* progressively diverged. The reduced form became strongly associated with newer functions, while the non-reduced forms reverted to their previous uses after the reduced forms increased their presence in the language. The development of the reduced forms was found to follow the Reducing and Autonomy Effects of high token frequency proposed by Bybee (2007). These results shed new light on the functional relationships that develop between reduced and non-reduced forms during grammaticalization, a topic in need of more attention and evidence in historical pragmatics.

1. Introduction

The present study aims to illustrate how the Japanese connective *soredewa* 'now/then' underwent a process of divergence by quantitatively tracking the developments of its variant forms.[1] According to [33]; divergence is a type of semantic-pragmatic change in which a new lexical form splits off from the original lexical form, which may remain as an autonomous element. The resulting forms may continue developing on their own and coexist with the original form for several centuries. In the case of the English indefinite article 'a/an', for instance, the word 'an' in Old English, pronounced as the segment 'one' in the word 'stone', eventually split into two lexical forms, 'one' and 'a/an': the former is derived from the full form, while the latter is derived from a cliticized form. By tracking the semantic-pragmatic uses of all of the variants of the Japanese connective *soredewa* over three centuries, the present paper demonstrates that *soredewa* experienced a similar divergence, whereby the forms that retained the anaphoric component *sore* 'that' diverged in usage from those that lost it. More importantly, this study shows that, as far as the development of *soredewa* is concerned, this divergence process involved not only the acquisition of a stronger pragmatic force in the reduced forms but also the opposite change in the original full form, reversing its course of change by regaining the original semantic meaning.

The analysis of the historical development of the connective *(sore)dewa/ja* in this study adopts a usage-based approach [8,16,52]. This approach regards language as a complex adaptive system

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[1] The present study adopts the term *connective*, an English translation of the Japanese grammatical category *setsuzokushi*, to refer to connective expressions that primarily serve to create coherence at the semantic and pragmatic levels, similar to *and*, *but*, and *so* in English. These Japanese expressions are free morphemes that typically appear at the sentence-initial position [48]. explains this Japanese grammatical category in detail. The term *discourse marker* will be used as a cover term to refer to that functional category of expressions whose primary function is to signal non-propositional aspects of communicative force such as discourse organization, cognitive process, modalization, and interactional management. This group of expressions covers a wide range of expressions, including connectives and other types of pragmatic markers such as modal particles (such as the German *doch*) and interactional markers (such as the English *say*).

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shaped by the language user's experience with it, in contrast with the static self-contained system conceived by more traditional linguistic analysis. Rather than relying on speakers' grammaticality judgments, the usage-based approach considers the actual use of language in discourse as its primary data and methodology and emphasizes the importance of the frequency of occurrence in analyzing linguistic elements. Such an approach allows one to address the non-discrete nature of linguistic categories and capture gradual changes that arise as a consequence of real human behavior, thus providing an appropriate and effective way to examine grammaticalization and other semantic-pragmatic changes.

In this study, the proposed divergence change in the connective *soredewa* is revealed quantitatively based on frequency analysis, a method that yields a straightforward and accurate picture regarding its shift in dominance from semantic to pragmatic use. In addition, special attention is paid to how the effects of token frequency, namely, the Reducing and the Autonomy Effects, interact and affect the pragmatic strengthening of *(sore)dewa*. The Reducing Effect refers to the effect whereby frequently used words or phrases reduce their forms [7,10,32]. This effect is often, but not always, observable in the erosion and/or phonological reduction of words or phrases, as well as in word and morpheme fusion [33,56,57]. The Autonomy Effect refers to the effect whereby frequently used and morphologically opaque words or phrases become more autonomous, resulting in their tendency to be stored as whole units in the lexicon [7,10,11]. On the other hand, infrequent and morphosemantically transparent words or phrases are considered to be less autonomous and are derived by morphological rules. The degrees of form reduction and autonomy are expected to shift over time with token frequency. More specifically, as token frequency increases, increased erosion should occur, and, consequently, more eroded variants should appear. Because form erosion and/or phonological reduction renders the morphosemantic structure of the word more opaque, this increase in eroded variants also leads to increased autonomy. This prediction is tested in the present study by quantitatively tracking the semantic-pragmatic meanings expressed by *soredewa* and its variants in historical Japanese texts from the mid-17th to mid-20th centuries.

2. Background

The pattern of morphological structure and grammatical functions of *sore-de-wa* are typical of the majority of common connectives, such as *sore-de-mo* 'but' and *sore-da-kara* 'so', in present-day Japanese. Their full forms are internally an adverbial phrase, consisting of (1) the anaphoric term, (2) a copula, and (3) a particle, and all of these connectives have reduced counterparts without the anaphoric component. The first morpheme of the connective *sore-de-wa* is a mesial demonstrative pronoun that, when used anaphorically, refers to a prior discourse segment. The second morpheme *de* 'to be' is the gerundive copula, which connects to the following clause to form a bi-clausal sentence, serving a similar function as the English conjunction 'and'. The sequence *sore-de*, thus, conveys the meaning of 'being so, and'. The final morpheme *wa* is a topic-marking particle, but when combined with a copula, as in the sequence *de-wa*, it conveys the conditional meaning 'if' [1,18,44].[2] Thus, the entire sequence *sore-de-wa* serves as an adverbial clause, roughly meaning 'if being so, then'.

As shown in Table 1, reduction in a different segment of the connective results in a different variant form. The anaphoric term *sore* can be reduced to *soi/son* to *n* to zero [24]. The non-anaphoric component *dewa* can be reduced to *jā* [50].[3] The variant form chosen appears to be related to the formality or spontaneity of the conversation [24]. shows that the construction *soredewa* tends to be reduced in casual conversations with close friends to *soijā* or even shorter form *jā*, or alternatively, *sonjā* or *njā*.

Table 1
Variant forms of *soredewa*.

Increased reduction in *sore* ↓ / Increased reduction in *dewa* →		
	soredewa	*sorejā*[a]
	soidewa	*soijā*
	sondewa	*sonjā*
	ndewa	*njā*
	dewa	*jā*

[a] In this paper, no distinction in the length of the final vowel is made for *sorejā* and *jā*. The only exception is when referring to a particular token appearing in an excerpt.

[45] proposes that the original adverbial phrase *soredewa* is grammaticalized into a discourse marker. This process is accompanied by the appearance of reduced non-anaphoric variants such as *dewa* and *jā*. Recent studies also suggest that this is a typical pathway in the development of Japanese connectives [47]. proposes that *datte* 'because' stemmed from the adverbial construction *sore-dattemo* 'even so' [80]. and [31] demonstrate the presence of a gradual transition from *sore-dakara* 'because being so' to *dakara* 'because' [46]. maintains that *daga* 'but' and *dakedo* 'but' stemmed from *sore-daga* 'even so' and *sore-dakedo* 'even so', respectively.

Diachronic studies on the connective *soredewa* have shown that it was initially an anaphoric adverbial phrase that developed into a semantic connective that expressed a conditional relation, and subsequently became a pragmatic connective that signals relations between speech acts and discourse boundaries. Many studies note that *soredewa* and *dewa* began to appear during the Early Modern Japanese period (1603–1868) [38,39,45,54,80]. The former form first appeared in texts from the 17th to 18th centuries. As shown in (1) and (2), it behaved more like an anaphoric expression that refers back to a prior discourse segment than a lexical item with its own semantic meaning [38,39,45] and was often used to introduce a negative consequence [80,81].

(1) *Suō-otoshi* (Published in 1642)

(1.1) A: *Ojigo-sama-wa Ise-e ikō demo nashi,*
Uncle-mister-TOP[4] Ise-to go.will COP-FP not.and
iku-mai dem gozaran

[2] A close functional relationship between topics and conditionals has been known to exist cross-linguistically [25,42]. This holds true for Japanese. In addition to *dewa* as a conditional, the conditional particle *-ba* also historically arose from the topic marker *wa* [18,75].

[3] The contraction of the *dewa* to *jā* morphemes is not an isolated change to the connective *soredewa* in modern Japanese, and can be found in other copulaic constructions such as negative constructions and nominalizations, as well as in some western dialects [65]. Historical texts show that the original copulaic form *dearu*, from which all the other copulaic forms evolved, became reduced to *dea*, and eventually *jā*, which started appearing in Late Middle Japanese (1200–1600) [18,51].

[4] ACC = accusative, CL = noun classifier, CN = connective, COP = copula, DAT = dative, FOC = focus particle, FP = sentence-final particle, GEN = genitive, GEP = general extender particle, IMP = imperative, HRT = hortative, HON = honorific, N = nominalizer, NOM = nominative, PRG = progressive, PSS = passive, PST = past tense, QT = quotative particle, RST = resultant, TOP = topic marker, VLT = volitional.

go-will.NEG COP-FP COP.HON.NEG (Yajima, 2013, p. 276)

'Your uncle will either go to Ise or not go to Ise.'

(1.2) B: *Kore-wa ikana koto* ***Sore****dewa shiren.*

This-TOP what thing that-COP-TOP know.not.

'What does this mean? **That** doesn't help me (I don't know just from that).'

(Kobayashi, 1996, p. 279)

(2) *Ukiyoburo* (Published in 1809–1813)

(2.1) Tobi: "… (yuki-ga) atama-no ue-e ni-jō-mo tsumoru."

Snow-NOM head-GEN above-to two-*jō*-even accumulate

'Snow will accumulate on one's head as high as two *jō* (approximately 20 feet).'

(2.2) Chokugē: "*Hate kowai-ne.* ***Soredewa*** *shini mashō.*"

then scaring-SP CN die will

'Oh, that's scary, isn't it? **If that's true**, you will die.'

(Yajima, 2013, p. 268)

[80] reports that this usage of conveying negative consequences decreased over time and shifted to conveying more neutral or positive consequences. This change coincides with the appearance of the reduced form *dewa* [38,45,72,80].[5]

It has been noted that *(sore)dewa* began to adopt new pragmatic uses after it became decategorized into a connective from an adverbial clause [38,45,72,80]. In particular, the function of *(sore) dewa* expressing 'farewell' is widely acknowledged in several grammar books and dictionaries [29,43,44,50,72] [45]. explains that this farewell expression in fact relates to the more general pragmatic function of marking discourse boundaries, and notes that the connective is used when "the speaker takes it as natural to move to a new stage of a conversation", conveying something similar to 'Well, then … ' in English (p. 346).

According to [80]; another pragmatic use of *soredewa* began to appear at the beginning of the 19th century. This use expresses subjectivity in conjunction with a variety of modal expressions, such as imperative and volitional modal, as shown in (3) and (4). In (3), the character declares his commitment to the future action, indicated by the volitional form *iō* 'will say', of speaking about the absence of someone. In (4), the reduced form *sorejā* conveys the speaker's desire or wish with a request phrase, *sō shite okunnasai-yo* 'please do so'.

(3) Mu, soredewa inē to demo iō.

Mm CN do.not.exist QT GEP say.VLT

'Mm, **So/then**, I will probably say things like (he/she) is not here.'

(4) *Ai sō dakke-ne sorejā sō shite okunnasai-yo*

Well so COP.FP-FP CN so do.and give.HRT-FP

'Oh, you are right. **So/then**, please do so.'

[5] The majority of studies take the position that *dewa* derived from *soredewa* through phonological erosion and/or reduction [24,43–45,72], but [54] carries out a diachronic analysis of *soredemo* 'but' from an alternative perspective.

To sum up the diachronic developments of *soredewa* identified by previous studies, the connective first emerged as an anaphoric adverbial phrase, then became a causal connective, and later transformed into a discourse marker that indicates discourse boundaries and expresses subjectivity in conjunction with modal expressions. With the goal of offering a close look at this diachronic process, the present study examines in detail how the different semantic-pragmatic uses of *soredewa* developed as well as how they related to changes in form. More specifically, the present study attempts to illustrate that the actual change that the connective underwent is not as unidirectional in all its variant forms as has been reported by previous studies.

3. Research data

Because electronic recording was not available until the twentieth century, investigations of the pragmatic use of language rely on speech-based written texts [36]. Speech-based written texts, if selected properly, are commonly regarded as legitimate data in historical pragmatics [67]. Many scholars recognize that fiction and play dialogues are reasonable sources of speech-based texts [36,67–69]. To examine the historical development of connectives in Japanese, *gesaku* 'vulgar' literature and *kyōgen/kabuki* theatrical scripts are commonly adopted as research data (e.g., [39,47,54,79].

Taking this textual condition into consideration, a total of 200 literary works from the mid-Edo period until the mid-20th century, a time span that includes the full course of development of *(sore) dewa*, were selected for the present analysis. For the mid-Edo period, the present study adopted 100 *kyōgen* (comic theater) scripts published in 1660 and 1700, available in volume 58 of *Shin-Nihon Koten Bungaku Taikei* [28]. These scripts were chosen because *kyōgen* dialogues are known to have used the colloquial language of the Muromachi (1336–1573) and early Edo periods [3]. For the late Edo period (the 1750s–1830s), 20 literary works in volumes 79 and 80 of *Shinpen Nihon Koten Bungaku Zenshū* [49,71] were selected. These works include *kibyōshi* (picture-book stories), *sharebon* (pleasure-quarter stories), *kokkeibon* (humorous stories), and *ninjōbon* (sentimental stories), which are known to employ the colloquial language of the period in their dialogue segments [23,76].

For the subsequent time periods (1868 to the mid-20th century), 20 works from each of the four time periods (1880s–1890s, 1900s–1910s, 1920s–1930s, and 1940s–1950s) were randomly selected from the online digital literary corpus *Aozora Bunko* 'Blue Sky Library'. Because the 1880s–1890s period included only 17 works, three additional works were taken from the *Kindai Josei-zasshi Kōpasu* 'Modern Women's Magazine Corpus' produced by National Institute for Japanese Language and Linguistics (NINJAL) and the *Denshi Bungei-kan* 'The Japan P.E.N. Club Digital Library', a digital archive of largely copyrighted literary works made available with the permission of the copyright holders. The website is a publicly accessible archive of approximately 850 works from different genres, including novels, essays, poems, screenplays, and non-fiction texts. To minimize the effects of story length, stories containing greater than 40,000 characters were cropped to their first 40,000 characters.

It is important to note that the selected literary works do not always reflect the colloquial language of their time. The transition from the literary language style, featuring everyday dialogue of markedly colloquial Japanese with elegant narrative passages blending classical Japanese and Chinese [23,76], to the colloquial style is not seen until the early 20th century in Japanese literature.

Table 2
Total number of characters for each of the six time periods.

Time period	1 Mid-Edo period	2 Late-Edo period	3 1880s–90s	4 1900s–10s	5 1920s–30s	6 1940s–50s
Total Number of Characters	320,000	210,000	120,000	80,000	70,000	90,000

In addition, certain studies indicate that the connective *(sore) dewa/jā* appears frequently in spoken language or the conversational segments of written texts [39,53]. Therefore, to minimize interference from non-representative data, the present analysis solely uses texts appearing in direct quotations, which generally reflect the colloquial language of the time.

Table 2 shows the total number of characters occurring in direct quotation segments for each time period. These numbers indicate the textual lengths of the conversational segments analyzed. Because the texts from the mid- and late-Edo periods are not digitized, the number of characters in the direct quotation segments of these texts was calculated with a random sampling method,[6] which gave rough estimates of 320,000 characters for the mid-Edo period *kyōgen* scripts and 210,000 characters for the late-Edo texts.

4. Form analysis and results

There are four variant forms in total, *soredewa*, *sorejā*, *dewa*, and *jā*. This section analyzes how each variant form varies in frequency across the time periods, and how each form relates to the overall frequency trend. Table 3 and Fig. 1 show the (a) raw frequencies, (b) normalized frequencies, and (c) proportions of the four variant forms across the six time periods. The overall normalized frequency displays two peaks, 592 tokens per million characters (TPMC) at the 1880s–90s and 971 TPMC at the 1920s–30s. In terms of proportion, the dominant form shifts from *soredewa* to *sorejā*, and later to *jā*. The original form, *soredewa*, is most dominant during the mid-Edo period (89% frequency), and its presence substantially declines thereafter. In contrast, the reduced form *sorejā* reaches a frequency of 79% in the late-Edo period. The further reduced forms *dewa* and *jā* first appear in the 1880s–90s. Subsequently, the proportion of *sorejā* significantly decreases while the proportion of *jā* continues to rise.

The overall proportion of the anaphoric tokens (forms containing the anaphoric component *sore*, i.e., *soredewa* and *sorejā*) decreases from 100% in the mid-Edo period to 26% in the 1940s–50s, while the overall proportion of the non-anaphoric tokens (*dewa* and *jā*) increases from 0% to 74% during the same time period. The switch in dominance from anaphoric to non-anaphoric variants occurs between the 1880–90s and the 1900s–10s. The loss of the anaphoric component, *sore*, corroborates the claim that pragmatic strengthening is often accompanied by form erosion [30] and the Reducing Effect of token frequency, whereby an increase in token frequency results in form reduction [7]. The process of erosion appears to end in the 1940s–50s, as the proportion of non-anaphoric variants shows little change from the 1920s–30s to the 1940s–50s, as does the normalized frequency.

5. Functional analysis and results

5.1. Overview

In the present study, the term *semantic meaning* or *semantic use* refers to the truth-conditional meaning or use of a proposition. In contrast, as adopted by many scholars [4,6,15]; p. 303; [74], the term *pragmatic meaning* or *pragmatic use* refers to non-propositional, inferential, and subjective aspects of communication, signaling illocutionary, intratextual, and interpersonal relations. More specifically, the present study construes that pragmatic use can be grouped into two subtypes, interpersonal and textual use, following [6] taxonomy of pragmatic function, which is in turn based on Halliday's functional-semantic components of the linguistic system [26,27]. Textual use includes organizing discourse according to information structure and creating cohesion, namely, relating one textual element to another. Brinton maintains that this use involves organizing text at the global level of discourse, including the functions “to initiate and close discourse”, “to mark topic shifts”, “to indicate new and old information”, and “to constrain the relevance of adjoining utterances” (p. 39). Such a demarcation is similar to [63] notion of discourse markers that serve to arrange sequential units of discourse. Interpersonal use refers to the expression of “the speaker's attitudes, evaluations, judgments, expectations, and demands, as well as of the nature of the social exchange, the role of the speaker and the role assigned to the hearer” [6]; p. 38). This includes the expressions of subjectivity and intersubjectivity conceived by Traugott and others [40,73,74]. Discourse markers whose primary functions express such subjectivity and intersubjectivity are commonly called modal particles in Germanic languages and sentence-final particles in Asian languages. In contrast, discourse markers with primarily textual functions are called connectives.

[66] proposed the existence of coherence relations in three domains of language. Her framework is particularly crucial for distinguishing between the semantic and pragmatic uses of textual function. Our analysis on the coherence relations expressed by *soredewa* and its variants is based on her categorization. According to her analysis, the conditionals in (5a), (5b), and (5c) convey coherence relations in the content, epistemic, and speech-act domains, respectively.[7]

(5a) If John goes to a party, he gets drunk.

(5b) If John went to the party, he was trying to infuriate Miriam.

(5c) How old are you, if it's not a cheeky question?

(Knott, 2001, p. 143)

The conditional *if* in (5a) expresses the semantic relation, in which the speaker delivers the utterance with the intention of making the interlocutor believe that John's going to a party is sufficient to ensure the fulfillment of the consequence. In contrast, the conditional in (5b) expresses that what is expressed in the apodosis is a conclusion that is pragmatically drawn from the premise in the protasis [37]. convincingly argues that the protasis and apodosis in this use should be interpreted as two speech acts, one asserting the speaker's belief, and the other causing the interlocutor to believe the drawn conclusion. The speaker here delivers the utterance with

[6] The number of characters was counted for every 10th page of the analyzed stories. The average number of characters per page was calculated by averaging these values. Then, the total number of characters was estimated by multiplying this average number by the number of pages that the stories contained. Only direct quote segments were used for these calculations.

[7] [63]; p. 202) uses the terms fact-based, knowledge-based, and action-based, respectively, for these causal relations.

Table 3
Raw frequency, normalized frequency, and proportion of variant forms.

		Token frequency	1	2	3	4	5	6
			Mid-Edo period	Late-Edo period	1880s–90s	1900s–10s	1920s–30s	1940s–50s
Anaphoric	*soredewa*	(a) Raw	8	16	15	6	9	8
		(b) Normalized	25	76	125	75	129	89
		(c) Proportion	89%	21%	21%	16%	13%	12%
	sorejā	(a) Raw	1	59	39	9	6	9
		(b) Normalized	3	281	325	113	86	100
		(c) Proportion	11%	79%	55%	24%	9%	14%
	Total	(a) Raw	9	75	54	15	15	17
		(b) Normalized	28	357	450	188	214	189
		(c) Proportion	100%	100%	76%	41%	22%	26%
Non-anaphoric	*dewa*	(a) Raw	0	0	7	6	13	14
		(b) Normalized	0	0	58	75	186	156
		(c) Proportion	0%	0%	10%	16%	19%	22%
	jā	(a) Raw	0	0	10	16	40	34
		(b) Normalized	0	0	83	200	571	378
		(c) Proportion	0%	0%	14%	43%	59%	52%
	Total	(a) Raw	0	0	17	22	53	48
		(b) Normalized	0	0	142	275	757	533
		(c) Proportion	0%	0%	24%	59%	78%	74%
All variants	(a) Raw	9	75	71	37	68	65	
	(b) Normalized	28	357	592	463	971	722	

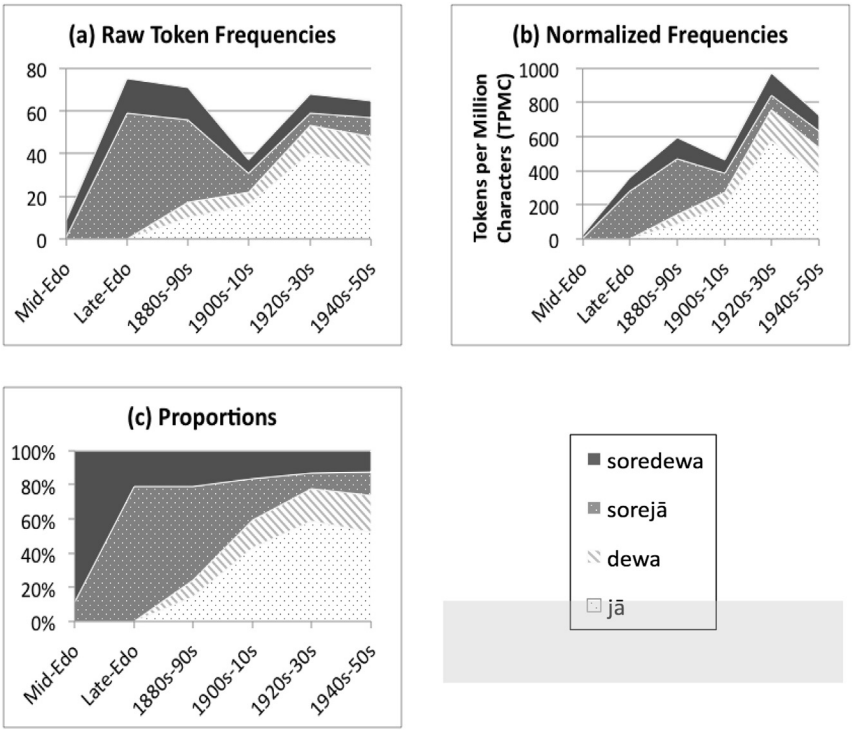

Fig. 1. Raw frequency, normalized frequency, and proportion of variant forms.

the intention of making the interlocutor believe that the knowledge of John's going to a party is sufficient to assume that John was trying to infuriate Miriam. Finally, the conditional in (5c) expresses a causal relationship at the level of speech acts. The condition in the protasis enables the speaker to perform the speech act in the apodosis. The present analysis adopts the commonly held view that semantic use corresponds to coherence relations between the propositional content of two utterances, while pragmatic use corresponds to coherence relations between two speech acts [37,78]. Thus, the use of conditionals in the content domain of (5a) is viewed as semantic use, while the use of conditionals in the epistemic and speech-act domains in (5b) and (5c) are considered to be pragmatic use. The connective's textual functions will be analyzed in Section 5.2, and its interpersonal functions will be examined in Section 5.3.

5.2. Textual functions

5.2.1. Categories of textual function

The present study identifies four textual uses at the local level and one at the global level. The four uses at the local level are called Evaluative Comment (EVC), Epistemic Conclusion (EPS), Speech Act

(ACT), and Turn-taking (TRN), while the use at the global level is called Frame Change (FRC). Roughly speaking, EVC corresponds to the original anaphoric use identified in previous studies. EPS and ACT are more precise definitions of what Yajima(2013) calls expressions of modality. FRC generally corresponds to [45] notion of discourse boundaries. TRN is a novel use proposed in this study.

The first category, Evaluative Comment (EVC), serves to introduce the speaker's evaluation by syntactically and semantically tying a comment predicate to the preceding discourse segment. This use appears when the speaker reacts either to a prior discourse segment provided by the interlocutor or to an unfolding speech situation, and conveys its desirability by providing an evaluative predicate or describing a potential consequence. The connective creates a coherence relation between the protasis and the apodosis by treating them as topic and comment [2]; [19]; [20]. This category encompasses two subtypes: (a) evaluation with an evaluative predicate and (b) evaluation with the description of a potential consequence. The evaluative predicates identified by the present analysis are, consistent with previous studies on Japanese conditionals, predicates that express desirability, including evaluative adjectives (i.e., *ii* 'good', *daijōbu* 'all right', *dame* 'not good', and *kinodoku* 'pitiable'), evaluative verbal phrases (i.e., *kamawanai* 'okay', *shikata ga nai* 'unavoidable', *komaru* 'troubling', and *sumanai* 'cannot get away with it'), and evaluative nouns (i.e., *maotoko* 'adultery', *sukebei* 'pervert', and *kichigai* 'psycho'). For instance, the apodosis of (1.2) in Section 2 contains the evaluative verbal phrase *shiren* 'I don't know'. The comment provides the speaker's evaluation (desirability) of the situation given by the interlocutor at line (1.1). The given situation in the preceding discourse constitutes the topic of evaluation, and the connective links it to the evaluative predicate that follows, resulting in topic-comment structure.

The other Evaluative Comment subtype connects the situation in the protasis to an event or situation in the apodosis as a potential consequence. These potential consequences are either negatively or positively described. For instance, the apodosis of (2.2), *shini mashō* 'you will die', is a negative description of an event that could occur as a consequence of the situation described by the interlocutor at line (2.1). The speaker conveys its negative desirability by stating a negative consequence. The causal relation between protasis and apodosis is part of the propositional meaning of *soredewa/jā*, viz., the former constitutes a sufficient condition for the realization of the latter [77]. Thus, both subtypes of Evaluative Comment can be categorized as semantic use, namely, coherence relations in the content domain [37,66].

(6) *Abe Ichizoku* (Published in 1913)

(6.1) Chōjirō's wife: " *Taisō yoku oyasumi-ni narimashita.*

Quite well sleep-DAT become.HON.PST

Ohukuro-sama-ga amari osoku nari-wa senu-ka

Mother-Mrs-NOM too late become-TOP do.not-FP

to osshaimasu kara, okoshi mōshimashita.

QT say.HON because wake tell.HON.PST

Soreni Seki-sama-ga oide-ni narimashita."

CN Seki-Mr-NOM come.HON-DAT become.HON.PST

'You slept fairly well. I woke you up because your mother asked me if it would get too late. Additionally, Mr. Seki dropped by.'

(6.2) Chōjirō "*Sō-ka. Soredewa hiru-ni natta to mieru.*"

so-FP CN noon-DAT become QT appear

'I see. **So/then (that means)**, it must be noon.'

The presence of *soredewa* signals that the speaker has utilized the information that was anaphorically referred to by the connective. Without the connective, it is less clear whether the speaker has made an inference from the prior discourse or reached his conclusion independently.

The third category, Speech Act (ACT), signals a link of enablement between the situation/event and a speech act whose intended effect is to induce or result in someone to take action, including what [64] calls directives (the addressee's action) and commissives (the speaker's action). Excerpts 7 and 8 contain cases of directives and commissives.

(7) *Aru onna no shōgai* (Published in 1921)

(7.1) "*Koyama-san, iyoiyo go-tai'in omedetō gozaimasu*"

Koyama-Mr. finally HON-discharge.hospital congratulations COP.HON

to toshikasana kangofu-chō-made Ogen-o mi-ni kite

QT old nurse-head-even Ogen-ACC see-to come.and

yorokonde kureta.

become.glad.and give.PST

'Even the old head nurse came to see Ogen and shared in her happiness, saying "Ms. Koyama, congratulations, at last, on your discharge from our hospital." '

(7.2) "*Dewa, obasan, go-kon'i-ni natta kata-no tokoro-e itte*

CN aunt HON-friendly become.and person-GEN -place-to go.and

owakarenasuttara ī deshō-ni"

farewell.do.HON.if good COP.shall-FP

' "**Then/okay**, Auntie, why don't you visit the people you became friends with and say goodbye?" '

(8) *Anatamo Watashimo* (Published in 1954)

This excerpt describes anglers who, under the order of police officers, had been unwillingly helping to search for a missing body in the ocean with an anchor rope and were about to abandon their search.

(8.1) *Ryoshi-tachi-ga ikari-nawa-o hikiageyoo-to suru to*,

Fisherman-PL-NOM anchor-rope-ACC pull.out.will-QT do when

'When fishermen were about to pull out the anchor rope,'

(8.2) *shio-michi-o miteita shifuku-ga,*

Tide-way-ACC watch.PRG.PST plain.cloth-NOM

'a police officer in plain clothes who was watching the tidal flow'

(8.3) *"Ja, ore-ga yattemiru" to, uwagi-o nuide, jibun-de yaridashita.*

CN I-NOM do.attempt QT coat-ACC take.off oneself-by do.start.PST

'saying "**Okay/now**, I will try", took off his coat, and started doing it by himself.'

In (7), the connective *dewa*, appearing at the beginning of (7.2), prefaces a suggestion uttered by Ogen's nephew in response to a speech context in which people had come to say goodbye. In (8), the connective *ja* at the beginning of (8.3) signals one police officer's offer of help in response to the anglers' decision to discontinue their efforts to find the body. In all of the Speech Act cases, the connective indicates that the speaker has responded either to the speech context or to what the prior speaker has said, enabling the speaker to coherently issue a speech act. Without the connective, it is less clear that the speech act was made as a response.

It should be noted that Speech Act can frequently overlap with Epistemic Conclusion when a yes-no question is formulated, as shown in Excerpt 9.[8]

(9) *Inoshi no shoya* (Published in 1936)

The despondent protagonist, who has Hansen's disease, is talking to another character, Saeki, who happens to have had the same disease.

(9.1) "Saeki-san-wa, mō ranbyō-ga onaorini-narareta-no desu-ka"

Saeki-Mr.-TOP already Hansen's.disease-NOM cured.HON-became.HON-N COP-FP

' "Mr. Saeki, did you also cure your Hansen's disease?" '

(9.2) *Osoru osoru kiite miru.*

scared scared ask.and attempt

'I ask nervously.'

(9.3) "*Naotta-sa, ranbyō-nanka itsudemo naoru-ne*"

Cured-FP Hansen's disease-GEP anytime be.cured-FP

' "I'm cured. Things like Hansen's disease will be always cured, you know?" '

(9.4) "*Soredewa watashi-mo naorimashō-ka*"

CN I-FOC be.cured.will-FP

' "**So/then (that means)**, am I gonna get cured as well?" '

(9.5) "*Naoran-ne. Kimi-wa. Naoran-ne. Okinodokuja-yo*"

be.cured.not-FP you-TOP be.cured.not-FP sorry-FP

' "You won't get cured. You won't. I am afraid." '

In (9.4), the protagonist continues his inquiry and asks a follow-up question about his prognosis. The connective in this line signals that his upcoming speech act, questioning, is a response to his realization, informed by Saeki's statement, that not all people die from the disease. This act is the speaker's attempt to acquire new information by prompting the addressee to answer the question. When such a question takes the form of a yes-no question, it simultaneously constitutes a conclusion that the speaker has drawn. Thus, the coherence relation is not exclusively in the speech-act domain but also relates to the epistemic domain.

The fourth textual use is known as Turn-taking (TRN). Connectives contribute to turn-taking because they signal that the speaker has responded to an unfolding situation or discourse. As shown in (9.4), the marker coincides with the speaker's initiation of a new turn. A token is identified if it occurs at the utterance-initial position, but not if it occurs at the second position immediately after another token, such as *oya* 'oh' and *sokka* 'I see', as shown in (6.2).

The final textual use, Frame Change (FRC), indicates frame change, and contributes to coherence at the global level. There are three FRC subtypes: (a) the (pre-)closing of a conversation, (b) the beginning of a new activity, and (c) the beginning of a direct discourse representation. All of these subtypes signal either a discourse boundary or a transitional phase between activities or larger units of discourse, serving as a contextualization cue that indicates a change of frame [22]. Because such marking is not part of the propositional meaning of the conditional *soredewa/jā*, it is treated as pragmatic use in the present analysis.

The first subtype of FRC use initiates the closing of a conversation. Similar to pre-closings in English, which are frequently accompanied by discourse markers such as *okay*, *well*, and *so* [62], *(sore)dewa/jā* serves as a pre-closing cue word or a terminal leave-taking expression [70]. In Japanese, pre-closing markers often evolve into leave-taking expressions, as evidenced by expressions such as *sayonara*, *saraba*, and *shikaraba*, all of which started as conditionals meaning 'if that is so' that became leave-taking expressions meaning 'good-bye' [44,50]. Similarly, *(sore)dewa/jā* has also acquired the leave-taking function, and currently serves as both pre-closing and leave-taking expressions [70]. Although closing markers and terminal farewell expressions, strictly speaking, are different notions at the local level, both contribute at the global level to signaling a transitional phrase or a negotiating activity to terminate the conversation. For this reason, the present study does not distinguish between pre-closing markers and leave-take (closing) expressions. If the speaker or addressee engages in any of the following actions within three turns after the utterance of *(sore)dewajā*, the token is considered to mark a (pre-) closing at the global level: (a) leaving, (b) an action that leads to leaving the location, i.e., standing up, (c) mentioning something that is relevant to the act of leaving such as "I've got to go", (d) uttering a leave-taking expression such as *sayonara* 'good-bye', or (e) bringing up a topic that needs to be mentioned before the conversation closes, which is called an "unmentioned mentionable" by Ref. [62].

The second FRC subtype marks the beginning of a new activity, including the resumption of conversation after a non-conversational activity. Although [45] refers to this use of *(sore) dewa* as an initiation of conversation, it should actually be interpreted as an activity shift from a physical (i.e., writing and cooking) or mental (i.e., reflecting and planning) task to conversation, with the co-participants maintaining their physical proximity and attention to each other. As Schegloff and Sacks (1973, p. 325) describes, these co-participants, such as the members of a household or the employees in an office, have been sharing the same physical location, are aware of each other's presence, and are "in a 'continuing state of incipient talk'[the single quotation marks are in the original text]". In contrast, when people encounter each other without a continuing state of incipient talk, they initiate conversation with an exchange of greetings. In the present analysis, instances of *(sore)dewa/jā* belong to this category when a character resumes speaking with someone after the narrative description of a prolonged pause

[8] While investigating the English discourse marker *so*, [63] pointed out similar cases of overlap.

within the same scene.[9]

The final FRC subcategory signals an upcoming direct discourse representation. [59]; p. 143) recognized such "utterance openers" as "signposts indicating that the upcoming discourse is direct DP [discourse presentation]" as well as marking "the boundary between reporting clause and reported clause". The English discourse markers *oh*, *well*, *look*, *now*, and *okay* display this boundary function. In an SOV language like Japanese, speech verbs employed for direct quotation such as *iu* 'say' are syntactically configured to appear after the quoted segment. Thus, the occurrence of the connective *(sore)dewa* before the direct quote of an utterance or mental thought is even more helpful to signal the switch to a direct quote. Excerpt 10 illustrates this use.

(10) *Onna-kyaku* (Published in 1905)

Mā, Otami-san toko-de yofukashi shite, soreja oyasumi-tte otaku-o deru.

well Otami-Ms place-at stay.up do.and CN good.night-QT house-ACC exit

'Well, I stayed up till late at Tami's place, and **So/then** good night, I said, and I left her house.'

In this example, the protagonist is recounting an event, and the connective *soreja* contributes to signaling the switch from the deictic center, whose origo is at the protagonist at the moment of speech, to a new center whose origo is the protagonist in the past. The connective also helps the addressee distinguish between the voice of the narrator and the voice of the quoted character. The independent expression *oyasumi* 'good night' does not indicate whether it is a direct or indirect quote, but taken together with the accompanying *soreja*, it is clear that the following segment is a direct quote. In Ref. [21] terms, the connective *soredewa/jā* serves to signal a change in footing from animator-author to animator-only.

Another contribution of the connective in a direct discourse representation is that it helps the addressee recognize that the utterance is the quoted character's reaction to something or someone else, as illustrated in Excerpt 11. The connective also serves to indicate that the quoted utterance or thought was produced in response to a situational change or mental event that occurred at the quoted moment.

(11) *Ukigumo* (Published in 1887)

(11.1) *"Hai watakushi-nyā watashi-no ryōken-ga arimasu.*

Yes I-DAT.TOP I-GEN view-NOM exist.HON

Hai, oyome-ni ikō-to ikumai-to watashi-no katte de-gozaimasu"

Yes marriage-DAT go-QT go.not-QT I-GEN freedom COP-HON

to iu-n-da-yo,

QT say-N-COP-FP

' "Yes, I have my own opinion. Yes. Whether getting married or not is none of your business", she told me,'

(11.2) *sorekara-ne watshi-ga "oya sorejā omae-wa oyome-ni ikanai ki-kae" to "Hai*

CN-FP I-NOM well CN you-TOP marriage-DAT go.not sprit-FP QT yes

kītarane, watashi-wa ki-ippon-de tōshimasu" tte.

asked.if-FP I-TOP spirit-one-with go.through QT

'Then, you know, "Oh, **so/then (that means)**, you won't get married?" when I asked her, "Yes, I will remain single", she told me.'

In (11.2), the mother's quoted utterance is depicted as a spontaneous response to her daughter's criticism in (11.1). The utterance starts with the expression of recognition, *oya* 'oh', followed by the connective *sorejā*, both of which help the audience follow the exchange of quoted utterances between the characters and enhance the liveliness of the exchange. In this way, the connective that appears in the enacted segments of narrative indicates that the segment results from a quoted character's spontaneous response. The utterance is presented as being based on the character's unplanned reactive judgment. Thus, it enhances the intensity of the narrative by depicting the scene as a dynamic interaction in which each character is spontaneously making decisions.

In summary, the three FRC subtypes indicate that the textual function at the global level is to signal a frame change. This contrasts with the textual function at the local level, which relates the upcoming utterance to the preceding discourse in terms of coherence relations and turn organization.

5.2.2. Distributions of textual functions

In the present study, all of the tokens of *soredewa* and its variants were tagged according to the categories of textual function introduced above. The distributions of each semantic-pragmatic use were examined to capture the evolution of the semantic and pragmatic forces in the connective and explore the interplay between form change and semantic-pragmatic meaning. It should be noted that many tokens reflected the multifunctionality of the discourse markers. If a token appeared to convey greater than one category of use, all its uses were recorded.

Table 4 shows the token frequency and proportion of each of the five textual uses across the six time periods. Fig. 2 graphically illustrates the changes in proportion. Notably, the sum of the categories in a time period may exceed the total token number or 100% because 77% of the tokens ($n = 249$) exhibit multiple textual uses. The most frequent combination is ACT and TRN, accounting for 46% of the tokens ($n = 157$). In addition, if a token showed at least one type of pragmatic use, it was counted under the label of overall pragmatic use.

Table 5 and Fig. 2 demonstrate a clear pattern of increasing diversity in semantic-pragmatic use over time; while the connective dominantly serves the semantic use, Evaluative Comment (EVC), in the mid-Edo period, pragmatic use begins to appear here, and increases in later periods. With respect to semantic use, a rapid decrease occurs (a greater than 70% drop) between the mid-Edo period and the 1880s–90s. In contrast, the four pragmatic uses generally show increasing trends. Speech Act (ACT) and Turn-taking (TRN) exhibit a convex trajectory with a peak in frequency between the 1900s–10s and the 1920s–1930s. Epistemic Conclusion (EPS) and Frame Change (FRC) show a smaller change, without a pronounced peak.

Fig. 3 illustrates the proportions of overall semantic and pragmatic use. Overall semantic use follows a general decreasing trend from 89% in the mid-Edo period to 5% in the 1900s–10s, followed

[9] Two tokens were not counted in this subcategory because each of them was the first utterance after the narration shifted to a new scene. This was interpreted as the author's effort to make the direct speech more authentic, suggesting that the character was responding to another character's prior utterance, which has no basis in the story.

Table 4
Overall distribution of textual uses.

Use		Time period					
		Mid-Edo	Late-Edo	1880s–90s	1900s–10s	1920s–30s	1940s–50s
Semantic	EVC	8	33	11	2	6	6
		89%	44%	15%	5%	9%	9%
Pragmatic	EPS	1	26	23	13	25	23
		11%	35%	32%	35%	37%	35%
	ACT	1	47	59	34	63	52
		11%	63%	83%	92%	93%	80%
	TRN	2	20	39	26	49	39
		22%	27%	55%	70%	72%	60%
	FRC	0	10	17	10	19	19
		0%	13%	24%	27%	28%	29%
	Overall	3	59	65	36	65	61
		33%	79%	92%	97%	96%	94%

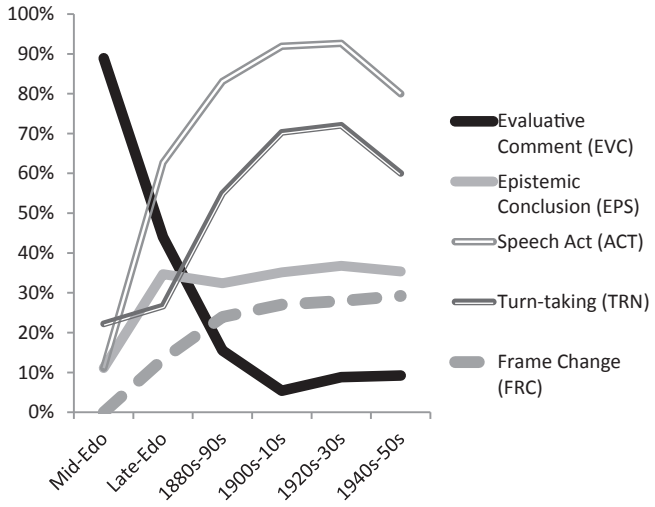

Fig. 2. Proportion of semantic-pragmatic use across time periods.

changes in these two types of forms follow different trajectories. Table 5 shows how the anaphoric and non-anaphoric variants develop their overall semantic and pragmatic uses with raw token

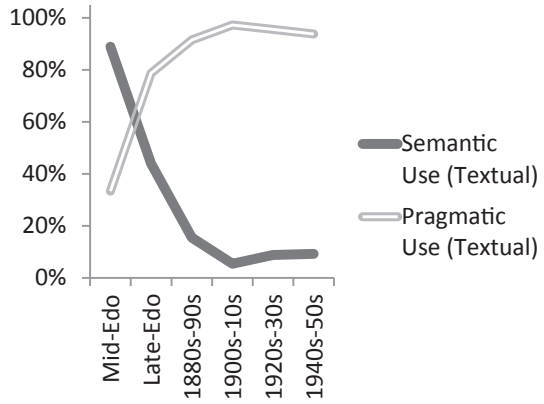

Fig. 3. Proportion of overall semantic and pragmatic use across time periods.

Table 5
Token frequencies and proportions of overall semantic and pragmatic use for anaphoric and non-anaphoric variants.

		Total number of tokens	Overall pragmatic use		Overall semantic use	
			Token frequency	Proportion	Token frequency	Proportion
Anaphoric variants	Mid-Edo	9	3	33%	8	89%
	Late-Edo	75	59	79%	33	44%
	1880s–90s	54	48	89%	10	19%
	1900s–10s	15	14	93%	2	13%
	1920s–30s	15	12	80%	4	27%
	1940s–50s	17	13	76%	6	35%
Non-anaphoric variants	Mid-Edo	0	0	N/A	0	N/A
	Late-Edo	0	0	N/A	0	N/A
	1880s–90s	17	17	100%	1	6%
	1900s–10s	22	22	100%	0	0%
	1920s–30s	53	53	100%	2	4%
	1940s–50s	48	48	100%	0	0%

by a resurgence. Overall pragmatic use shows an increase from 33% in the mid-Edo period to 97% in the 1900s–10s. Then, this trend halts and slightly declines in the 1920s–30s and 1940–50s. These patterns of change indicate that semantic bleaching and pragmatic strengthening were robust from the mid-Edo period to the 1880s–90s, but slowed down in the 1900s–10s, forming a shape that resembles the terminating end of an s-curve [13,33].

When the anaphoric (*soredewa* and *sorejā*) and non-anaphoric variants (*dewa* and *jā*) are analyzed separately, however, the frequencies and proportions across all time periods, and Fig. 4 graphically illustrates these proportionally shifting patterns.

For the anaphoric variants, one obvious pattern shows that semantic bleaching and pragmatic strengthening continue until the 1900s–10s, when this process is subsequently reversed. Overall semantic use decreases from the late Edo period to the 1900s–10s, and then increases from the 1900s–10s to the 1940s–50s. Overall pragmatic use, on the other hand, increases from the mid-Edo period to the 1900s–10s, but declines from the 1900s–1910s to

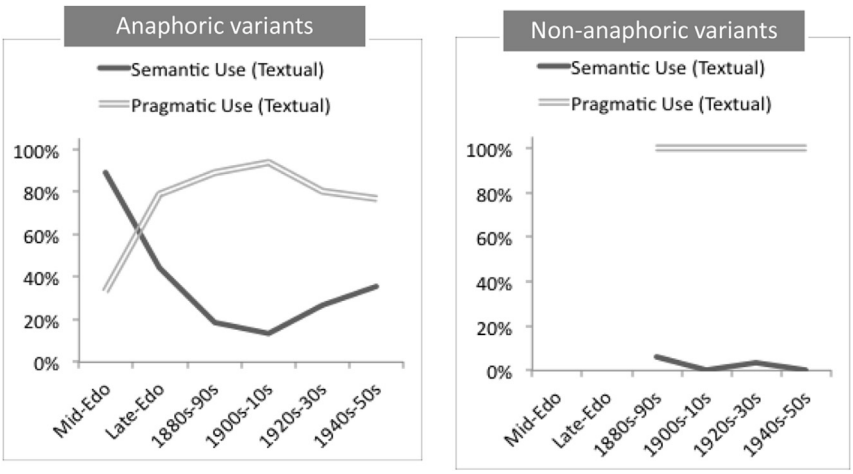

Fig. 4. Proportion of overall semantic and pragmatic use for anaphoric and non-anaphoric variants.

the 1940s–50s. These changes suggest that both the semantic bleaching and pragmatic strengthening trends halt and then begin to reverse course after the 1900s–10s.

The non-anaphoric variants *dewa* and *jā* demonstrate a different pattern. The non-anaphoric variants, appearing for the first time in the 1880s–90s, dominantly serve the pragmatic use and generally remain consistent across the time periods.[10] Unlike the anaphoric variants, no reversal is observed. Therefore, it is reasonable to claim that *dewa* and *jā* exhibit divergence from their anaphoric counterparts.

5.3. Interpersonal functions

5.3.1. Categories of interpersonal functions

Although the connective primarily serves the textual functions described in the preceding section, two types of interpersonal functions can also be identified. The first is the conveyance of the speaker's disaffiliative stance, while the second is the opposite of the first, the conveyance of the speaker's affiliative stance. As previously explained, an Evaluative Comment (EVC) conveys the speaker's stance on the topic provided by the interlocutor. This stance-taking, however, was not neutral originally, but was rather a predominately negative, disapproving response to the interlocutor's position [1,80]. Akatsuka convincingly argues that the connective particle *–tewa*, from which the connective *soredewa* derived, serves the speech acts of warnings and precautions by communicating the message, "Stop doing what you are doing" (1997, p. 325) [80]. study also observed that the use of the connective *dewa* to express a speaker's negative stance in Early Modern Japanese decreased over time. Consequently, Modern Japanese (1868-) does not retain this tendency. To examine the extent of negative-stance taking, the present analysis examines all of the instances of evaluative predicates in the excerpts and notes, observing whether a token expresses a positive/approving, negative/disapproving, or neutral tone. Because the predicates themselves express this stance semantically, with such lexical phrases as *ii* 'good' and *komaru* 'troubling', this interpersonal use is considered to be in the semantic domain.

The nearly opposite interpersonal function, marking the speaker's affiliative stance toward the interlocutor's position, is observed in Epistemic Conclusion (EPS) and Speech Act (ACT). This function appears in two contexts. The first context is when the speaker expresses an inference drawn from what the interlocutor has said, and the addressee confirms it. Such an inference indicates how well the speaker understands the topic or the interlocutor's position. The interlocutor's confirmation indicates that both the speaker and addressee are on the same page regarding the topic, and this enhances their solidarity. Moreover, this usage prompts the addressee to respond to what the speaker has said, promoting the addressee from the relatively passive position of listener to a responsive co-participant in the conversation, and results in increased involvement. This use is considered to be pragmatic because the content of such an utterance does not semantically indicate the speaker's stance, but the interaction itself signals that the speaker and addressee are in agreement.

The second EPS/ACT context occurs when the speaker issues a speech act in response to what the addressee has said. Such a move is typically based on the speaker's acceptance of what the addressee has said earlier, thus making the connective serve pragmatically as an indicator of acceptance or agreement. As illustrated in (12), the speaker might issue a speech act upon accepting the interlocutor's position. Here, the connective pragmatically signals the young man's acceptance of Priest's explanation.

(12) *Akuma no seidan* (Published in 1927)

(12.1) Priest: *Donna tsumi demo, tatoi hitogoroshi-no tsumi demo*

no.matter.what guilt but, even.if murder-GEN guilt but

kokoro-kara zange sureba kamisama-wa yurushite kudasai-masu.

heart-from repent do.if god-TOP forgive.and give.HON-HON

'Any sin, even the sin of murder, will be forgiven by God if you repent.'

(12.2) Young man: *Soredewa mōshiage-mashō*

[10] Interestingly, all three tokens of the non-anaphoric variants that carried the semantic use, a deviation from the quantitative trend, involved the casual register. The first token appeared in a 1880s–90s dialogue between two hunters with a command of vulgar language. The other two tokens appeared in a 1920–30s utterance involving someone giving permission to a subordinate. Thus, register, potentially relating to the depiction of the character or the interpersonal relationship with the interlocutor, appears to be a factor. This line of analysis is beyond the scope of the present study, but warrants future study.

Table 6
Overall distribution of interpersonal use.

Use		Time period					
		Mid-Edo	Late-Edo	1880s–90s	1900s–10s	1920s–30s	1940s–50s
Affiliative (Semantic)	Evaluative Predicate	3	25	7	2	3	6
		56%	33%	10%	5%	4%	9%
Disaffiliative (Pragmatic)	Inference & Confirmation	1	14	11	8	12	11
		11%	19%	16%	22%	18%	17%
	Acceptance & Speech Act	0	17	29	16	21	23
		0%	23%	42%	43%	31%	35%
	Overall	1	31	39	24	33	35
		11%	41%	57%	65%	49%	54%

CN tell.HON-VLT

'**Then/okay,** I will confess.'

In contrast, Excerpt 13 shows a speech act that does not involve the speaker's acceptance of what the interlocutor has said.

(13) Gessekai Basshōki (Published in 1907)

Five men went on a search mission to find a doctor. One man said that he was tired, and asked what time it was, and another man spoke the following words:

"Nanji-mo kuso-mo aru mon-ka.

What.time-FOC shit-FOC exist thing-FP

Ichinichi-ga nijū yo-jikan yori nagai-n da-kara

One.day-NOM twenty four-hour more.than long-N COP-because

Bokura-no motteiru tokei-ja wakaranai.

we-GEN have.RST watch-with cannot.understand

*Sā iyoiyo **ja** hakase-o sōsaku-ni dekakeyō kanā."*

look finally CN doctor-ACC search-to depart.VLT wonder

' "There is no use in asking what time it is. Because a day is longer than 24 hours (on this planet), our watches can't tell us anything. **Well anyway,** shall we go find the doctor?" '

In (13), the connective *jā* does not indicate the speaker's acceptance of what the interlocutor has said, viz., asking for the time. As he provides his criticism, *nanji mokuso moaru monka* 'there is no use in asking what time it is', it is clear that the speaker rejects what the interlocutor has said. Thus, unlike in (12), the connective in this excerpt does not function to signal the speaker's affiliative stance.

5.3.2. Distributions of interpersonal uses

Table 6 shows the distribution of the three interpersonal uses involving the disaffiliative and affiliative functions. As illustrated in Fig. 4, a shift from the disaffiliative to affiliative stance is evident. While the disaffiliative stance marking decreases from approximately 60% in the Mid-Edo period to 10% in the 1940s–50s, the affiliative stance marking, largely driven by Speech Act, increases from approximately 10%–50% in the same time span.

Table 7 and Figs. 5 and 6 show the distributions of disaffiliative and affiliative marking displayed by the anaphoric and non-anaphoric variants. The anaphoric variants show a significant decrease in disaffiliative marking from the Mid-Edo period to the 1880s–90s, followed by a reverse of this trend between the 1900s–10s and the 1940s–50s. Their affiliative marking, on the other hand, exhibits a rapid increase from the Mid-Edo period to the 1880s–90s, and this proportion is subsequently maintained at approximately 50%. It can thus be interpreted that the anaphoric variants shift from showing markers of disaffiliative stance to those of affiliative stance, and, finally, to an essentially neutral expression. In contrast, the non-anaphoric variants originate as affiliative stance markers, and essentially retain this function. While the semantic marking of disaffiliative stance remains zero, the affiliative stance, marked pragmatically, maintains a frequency of 50%–70% across the time periods. This is another case of divergence in which the anaphoric variants intensify their original functions to distinguish themselves from the non-anaphoric variants, paralleling the textual function results.

In summary, the connective *soredewa* underwent a robust increase in pragmatic force between the mid-Edo period and the 1880s–90s. This appears to have led to an increase in the reduced form *sorejā* in the late-Edo period and the eventual emergence of eroded variants, i.e., *dewa* and *jā*, in the 1880s–90s. These emerging forms were predominantly associated with pragmatic use. Although the original form *soredewa* and the reduced anaphoric form *sorejā* had already been used pragmatically by the 1880s–90s, they show a trend reversal towards semantic use over the last three time periods. This change contrasts with the steady trends of the non-anaphoric eroded variants. Overall, these two types of variants experienced divergence in semantic-pragmatic use.

5.4. Cumulative sum of normalized token frequency and erosion rate

The observations above account for how the divergence in semantic-pragmatic use took place between *soredewa/jā* and *dewa/jā*, but do not adequately explain why the eroded variants became more frequently used. The emergence of the eroded variants in the 1880s–90s and subsequent increase in frequency are, in fact, explicable if one relates erosion rates to frequency changes in semantic or pragmatic use. In particular, it becomes clear that the eroded forms *dewa* and *jā* increased their frequency due to elevated pragmatic use, with which they are strongly associated. It is well known that a lexical form that undergoes a change in semantic-pragmatic meaning can become polysemous when it acquires a new meaning through conventionalization of pragmatic use or inference (e.g. Refs. [4,5,33]. When two uses show a significant difference in frequency, form differentiation may ensue. This type of frequency-induced form differentiation is demonstrated by the development of the English word 'suppose', in which the newly developed modal meaning is more strongly associated with the more frequent, reduced form [7]. The split between the reduced forms *dewa* and *jā* and the anaphoric forms *soredewa* and *sorejā* appears to follow a similar path.

Fig. 7 illustrates the extent of the erosion, that is, the proportion

Table 7
Distribution of interpersonal use with anaphoric and non-anaphoric variants.

Use		Time period					
		Mid-Edo	Late-Edo	1880s–90s	1900s–10s	1920s–30s	1940s–50s
Anaphoric Variants	Semantic	5	25	7	2	3	6
		56%	33%	13%	13%	20%	35%
	Pragmatic	1	31	28	8	7	8
		11%	41%	53%	53%	47%	47%
Non-anaphoric Variants	Semantic	0	0	0	0	0	0
		N/A	N/A	0%	0%	0%	0%
	Pragmatic	0	0	11	16	26	27
		N/A	N/A	69%	73%	49%	56%

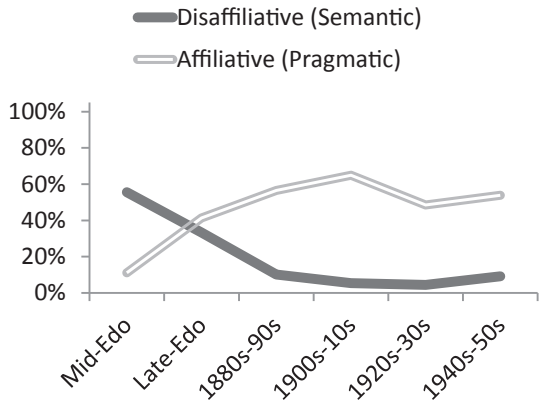

Fig. 5. Overall interpersonal use.

The stark contrast between the pragmatic and semantic tokens suggests that the erosion process, which involved the loss of the anaphora *sore*, varied for these two types of tokens in a manner similar to Bybee's characterization of the divergence of the English word 'suppose'.

The increasing pragmatic token erosion rate was strongly associated with the cumulative sums of normalized pragmatic use frequencies. Fig. 8 shows the cumulative sums of the normalized token frequencies by token type. For each period, the height of the bar represents the cumulative sum of the normalized token frequencies of all of the preceding periods and the period in question. This measurement shows how frequently the item in question appears from the mid-Edo period up to that period.[12] As the figure shows, the pragmatic token cumulative sums increase rapidly, while the semantic token cumulative sums remain nearly constant. The Pearson correlation coefficient, a co-occurrence statistical

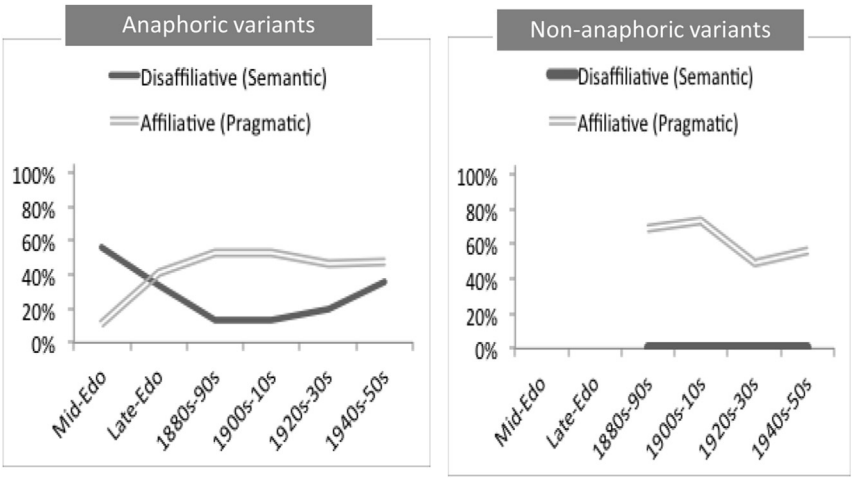

Fig. 6. Interpersonal use of anaphoric and non-anaphoric variants.

of the eroded forms *dewa* and *jā*, across the six time periods by token type. If a given token serves a pragmatic use, it is categorized as a token of pragmatic use, whereas if a given token serves a semantic use, it is categorized as a token of semantic use.[11] The erosion rates of the pragmatic tokens show a robust, progressively increasing trend over time, from 0% in the mid- and late-Edo periods to approximately 80% in the 1920s–30s and 1940s–50s. In contrast, only a small amount of semantic token erosion is seen. There are some fluctuations in the 1900s–10s, 1920s–30s, and 1940s–50s that appear to have been caused by low token counts.

measure, between the cumulative sums and erosion proportions was indeed quite high ($\rho = 0.93$). This indicates that the amount of erosion in a specific time period is determined by that of the preceding time periods. The more frequently a certain token type is used in the preceding time periods, the higher the form erosion of that token type will be, confirming the significant impact of the Reducing Effect [7].

To summarize the results of the analyses presented above, it was

[11] 30 tokens exhibited both semantic and pragmatic use.

[12] A useful analogy between token frequencies and cumulative sums of token frequencies are the speed at which one travels and the distance one travels at that speed. The distance is the cumulative sum of the speed.

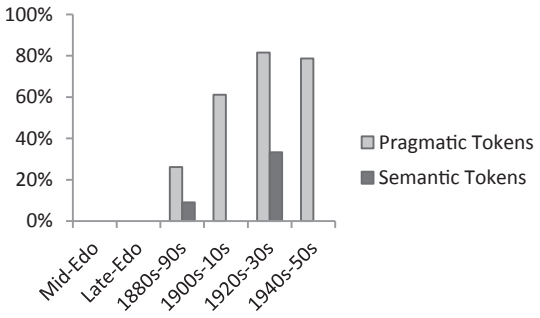

Fig. 7. Proportion of erosion by token type across time periods.

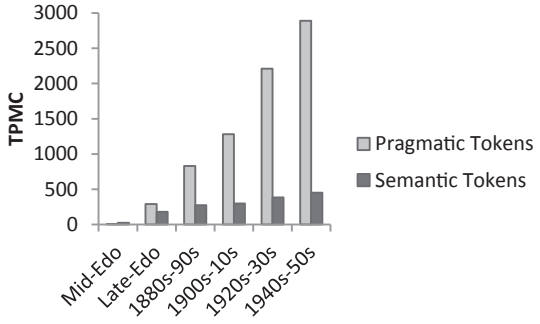

Fig. 8. Cumulative Sums of Normalized frequencies by token type across time periods.

found that *soredewa* and *sorejā* diverged from *dewa* and *jā* by regaining their semantic use and losing their pragmatic use, which ran counter to their early trends of semantic bleaching and pragmatic strengthening. As a result, over time, these two sets of variants grew more complementary: *soredewa* and *sorejā* were increasingly employed for semantic meaning, while *dewa* and *jā* came to be predominantly employed for pragmatic meaning. It was also found that erosion is closely related to token frequency. The extent of erosion was found to be highly correlated with the cumulative sum of the normalized token frequencies. Only pragmatic use tokens, which were more frequently observed than semantic use tokens, showed robust erosion. These patterns are consistent with the so-called Reducing Effect [7,32,33].

6. Discussion

As shown in Table 8, four stages of development for the connective *soredewa* are tentatively proposed based on the findings presented in the preceding sections. Stage 0 covers the initial appearance of the anaphoric adverbial phrase *soredewa*. The present study has confirmed the findings of previous studies [45,80] at this stage concerning the low token frequency of *soredewa* and its primary use for conveying negative evaluative comment.

Stage 1, the late Edo period, is the pragmatic strengthening stage during which the semantic force of negative evaluative comment weakened and the pragmatic force increased. The shift from negative to non-negative stance-taking during this period reported by Ref. [80] is confirmed by the present study, and should be taken as a case of desemanticization, by which specific features of meaning are lost and generalization of meaning occurs [33]. The high frequencies of *soredewa* and *sorejā* during this period, consistent with the findings by Refs. [80] and [39]; suggest that pragmatic strengthening was fairly vigorous during this period, as high token frequency is consistently found with increased pragmatic force [17]. The form reduction from *soredewa* to *sorejā* during this period also supports this claim. It is important to note that, despite the increase in frequency, functional differentiation did not appear at this stage, as the two forms *soredewa* and *sorejā* behaved identically.

Stage 2, spanning the 1880s–1910s, covers the initial phase of functional differentiation. Erosion advanced as the eroded forms *dewa* and *jā* gained more currency and became dominant. The present study argues that the differential erosion rates of semantic and pragmatic use resulted in divergence, in which *soredewa* and *sorejā* were correlated with semantic use, while *dewa* and *jā* were correlated with pragmatic use, and this distinction grew more significant with the passage of time.

Stage 3 covers the second phase of functional differentiation, which was driven by the "pragmatic weakening" of the anaphoric variants *soredewa* and *sorejā*, reducing their pragmatic use while regaining as their primary use their original semantic use of negative evaluative comment. This phase appears to have begun in the 1900s–10s when pragmatic strengthening ended. As a result, the functional differentiation between the anaphoric and non-anaphoric variants advanced further.

The four developmental stages described above are consistent with both the Reducing and Autonomy Effects proposed by Bybee and her colleagues [7,9,10,12]. First, as predicted by the Reducing Effect, the extent of erosion, i.e., the proportion of the reduced forms, was correlated with frequency. During Stages 2 and 3, pragmatic use was more frequent than semantic use, and tokens associated with the former use underwent more erosion than those associated with the latter use. Second, as predicted by the Autonomy Effect, form reduction resulted in greater autonomy due to semantic opacity, consequently causing the specialization of the reduced variants *dewa* and *jā* for conveying a more pragmatic meaning. In the case of the non-reduced forms, i.e., *soredewa* and *sorejā*, which show semantic transparency and low token frequency, weakening pragmatic force is seen after the 1900s–10s.

7. Concluding remarks

The present study has demonstrated that the Japanese connective *soredewa* underwent a process of divergence in which its non-anaphoric forms, *dewa* and *jā*, gained pragmatic force, while its anaphoric forms, *soredewa* and *sorejā*, became specialized for semantic use. The observed changes are compatible with the Reducing and Autonomy Effects of token frequency. These findings offer insight into the diachronic process that evolved from adverbial phrases with similar morphological formations, which produced numerous common Japanese discourse markers. The gradual transition in form erosion from *soredewa* to *jā* supports [45] view that non-anaphoric connectives were derived from anaphoric connectives through grammaticalization, and similar pathways have been proposed for connectives such as *sorede* 'and/then', *soredemo* 'but', *soredatte* 'because', *soredakara* 'so', *sorenanra* 'then', and *sorenanode* 'because' [31,47,60,61,79,80].[13] More importantly, our detailed illustrations of the changes in semantic-pragmatic meaning suggest that "semantic strengthening", a reversal of the trend of the original form, can occur during this common grammaticalization process in Japanese, and possibly in Korean as well [14,31,34,46,47,80].

The results of the present study also indicate a potential time lag between the initiation of form reduction due to high token frequency and the divergence of functional differentiation. The

[13] This also provides counter evidence for [53–55] argument that non-anaphoric connectives are derived from sentence-ending connective particles by replacement or omission of an utterance.

Table 8
Four stages of *soredewa*.

Stage	Dominant form(s)	Time period	Features
0	*soredewa*	Mid-Edo period (late17C - early18C)	Emergence of the sentence connective
1	*sorejā*	Late-Edo period (late18C - late19C)	Minor erosion Desemanticization and pragmatic extension
2	*jā* *sorejā* *soredewa*	1880s–1910s	"Initial Divergence" Major erosion, desemanticization, and pragmatic strengthening
3	*jā*	1900s–1950s	"Continued Divergence" Semantic regaining and pragmatic bleaching in *soredewa*/*jā*

connective *soredewa* increased its frequency and had two variant forms by the Late-Edo period, but a clear indication of its functional differentiation was not observed until the 1880s–1910s. Virtually all previous studies agree that high frequency is a necessary condition for divergence [9,14,35,41,58,60,61]. For example, both the English parenthetical *I don't know* and the Korean connective *kulentey* 'but' exhibit high token frequency and exhibit functional differentiation between their reduced and non-reduced forms. However, certain other expressions do not exhibit form reduction or functional differentiation despite having high token frequency. The English parenthetical *I don't think* and the Korean connective *kulayse* 'so' are cases in point; no functional differentiation has been found despite their having high token frequency and some degree of pragmatic use. Our finding of a delayed emergence of functional differentiation after a prolonged stage, possibly lasting over a century, of high token frequency, might help to explain why high frequency does not always co-occur with functional divergence. Given an expression, one might not find a clear indication of functional differentiation until a lengthy time period has passed in which substantial form reduction and pragmatic strengthening occurs. Therefore, for the purpose of researching what is required for an expression to initiate divergence, it might be necessary to track its changes in form and semantic-pragmatic meaning over long time periods.

References

[1] N. Akatsuka, Negative conditionality, subjectification, and conditional reasoning, in: A. Athanasiadou (Ed.), On Conditionals Again, John Benjamins, Amsterdam, 1997, pp. 323–354.
[2] N. Akatsuka, S. Strauss, Counterfactual reasoning and desirability, in: E. Couper-Kuhlen, B. Kortmann (Eds.), Topics in English Linguisitics: Cause–condition–concession–contrast: Cognitive and discourse perspectives, Mouton de Gruyter, Berline, 2000, pp. 205–234.
[3] Y. Akira, Kaisetsu, in: K. Tadahiko, Y. Akira (Eds.), Kyogenshu, vol. 48, Shogakkan, Tokyo, 1985, pp. 402–408.
[4] G. Andersen, Pragmatic Markers and Sociolinguistic Variation, John Benjamins, Amsterdam/Philadelphia, 2001.
[5] L. Arnovick, Diachronic Pragmatics: Seven Case Studies in English Illocutionary Development, John Benjamins, Amsterdam, 1999.
[6] L.J. Brinton, Pragmatic Markers in English: Grammaticalization and Discourse Functions, Mouton de Gruyter, Berlin, 1996.
[7] J. Bybee, Frequency of Use and the Organization of Language, Oxford University Press, Oxford, 2007.
[8] J. Bybee, Language, Usage and Cognition, Cambridge University Press, New York, 2010.
[9] J. Bybee, J. Scheibman, The effect of usage on degrees of constituency: the reduction of *don't* in English, Linguistics 37 (4) (1999) 575–596.
[10] J.L. Bybee, Mechanism of change in grammaticization: the role of frequency, in: B.D. Joseph, R.D. Janda (Eds.), The handbook of historical linguistics, Blackwell, Malden, MA, 2003, pp. 602–623.
[11] J.L. Bybee, M.A. Brewer, Explanation in morphophonemics: changes in provençal and spanish preterite forms, Lingua 52 (1980) 201–242.
[12] J.L. Bybee, R. Perkins, W. Pagliuca, The Evolution of Grammar: Tense, Aspect, and Modality in the Languages of the World, University of Chicago Press, Chicago, 1994.
[13] J.K. Chambers, Patterns of variation including change, in: J.K. Chambers, P. Trudgill, N. Schilling-Estes (Eds.), The handbook of language variation and Change, Blackwell, Malden, MA, 2002, pp. 349–372.
[14] J.B. Choi, A Corpus-based Discourse Analysis of Korean Discourse Markers: an Analysis of Spoken and Written Use, Ph. D. Dissertation, University of California, Los Angeles, 2007.
[15] C. Claridge, L. Arnovick, Pragmaticalisation and dicursisation, in: A.H. jucker, I. Taavitsainen (Eds.), Historical pragmatics, De Gruyter Mouton, Berlin, 2010, pp. 165–192.
[16] H. Diessel, Usage-based Linguistics. Oxford Bibliographies in "Linguistics", 2014. Retrieved from, http://www.oxfordbibliographies.com/view/document/obo-9780199772810/obo-9780199772810-0068.xml.
[17] B. Frank-Job, A dynamic-international approach to discourse markers, in: B. Fraser, K. Fischer, B. Mosegaard Hansen (Eds.), Approaches to Discourse Particles, vol. 1, 2006, pp. 359–374.
[18] B. Frellesvig, A history of Japanese Language, Cambridge University Press, Cambridge, 2010.
[19] S. Fujii, Quoted thought and speech using the mitai-na 'be like' noun-modifying construction, in: S. Suzuki (Ed.), Emotive Communication in Japanese, John Benjamins, Philadelphia, 2006, pp. 53–96.
[20] S.Y. Fujii, Mental-space builders: observations from Japanese and English condtionals, in: M. Shibatani, S.A. Thompson (Eds.), Essays in semantics and pragmatics: in honor of Charles J. Fillmore, John Benjamins, Amsterdam, 1996, pp. 73–90.
[21] E. Goffman, Forms of Talk, Blackwell, Oxford, 1981.
[22] J.J. Gumperz, Sociocultural knowledge in conversational inference, in: M. Saville-Troike (Ed.), Linguistic and Anthropology, Gergetown University Press, Washington D.C., 1977, pp. 191–211.
[23] Y.S. Habein, The history of the Japanese Written Language, University of Tokyo Press, Tokyo, 1984.
[24] T. Hagiwara, Ningen kankei to setsuzokushi no sutairu shifuto: daigakusei daigakuinsei sedai no zatsudanji no setsuzokushi no tsukaikata, Gunma Daigaku Ryuugakusei Sentaa Ronshuu 7 (2008) 11–31.
[25] J. Haiman, Conditionals are topics, Language 54 (1978) 564–589.
[26] M.A.K. Halliday, Modes of meaning and modes of expression: types of grammatical structure, and their determination by different semantic functions, in: D.J. Allerton, E. Carney, D. Holdcroft (Eds.), Function and Context in linguistic Analysis: a festschrift for William Haas, Cambridge University Press, Cambridge, 1979, pp. 57–79.
[27] M.A.K. Halliday, R. Hasan, Cohesion in English, Longman, London, 1976.
[28] A. Hashimoto, Y. Doi (Eds.), Kyōgenki, Iwanami Shoten, Tokyo, 1996.
[29] Y. Hatasa, K. Hatasa, S. Makino, Nakama 1, second ed., Cengage Learning, Boston, MA, 2010.
[30] B. Heine, On discourse markers: grammaticalization, pragmaticalization, or something else? Linguistics 51 (6) (2013) 1205–1247.
[31] Y. Higashiizumi, Periphery of utterances and (inter)subjectification in Modern Japanese: a case study of competing causal conjunctions and connective particles, in: A.D.M. Smith, G. Trousdale, R. Waltereit (Eds.), New directions in grammaticalization Research, John Benjamins, Amsterdam, 2015, pp. 135–155.
[32] J.B. Hooper, Word frequency in lexical diffusion and the source of morphophonological change, in: W. Christie (Ed.), Current progress in historical linguistics, North Holland, Amsterdam, 1976, pp. 95–105.
[33] P.J. Hopper, E.C. Traugott, Grammaticalization, second ed., Cambridge University Press, Cambridge, 2003.
[34] J.-e. Im, The Korean Discourse Marker Kulenikka: a Panchronic Study, Ph.D., University of Hawai'i, Manoa, HI, 2011.
[35] R. Ito, The functions of the Japanese conjunction (sore)de as a discourse marker, M.A. Thesis, Michigan State University, East Lansing, MI, 1995.
[36] A.H. Jucker, A. Jacobs, The historical perspective in pragmatics, in: A.H. Jucker (Ed.), Historical pragmatics, John Benjamins, Amsterdam, 1995.
[37] A. Knott, Semantic and pragmatic relations and their intended effects, in: T. Sanders, J. Schilperoord, W. Spooren (Eds.), Text Representation: linguistic and psycholinguistic Aspects, John Benjamins, Amsterdam, 2001, pp. 127–151.
[38] K. Kobayashi, Nihongo Jōken hyōgen-shi No Kenkyū, Hitsuji Shobō, Tokyo, 1996.
[39] O. Kyōgoku, E. Matsui, Setsuzokushi no hensen, in: K. Suzuki, Ō. Hayashi (Eds.), Hinshibetsu Nihon Bunpō kōza, Meiji Shoin, Tokyo, 1972, pp. 89–136.
[40] M.J. López-Couso, Subjectification and intersubjectification, in: A.H. Jucker, I. Taavitsainen (Eds.), Historical Pragmatics, De Gruyter Mouton, Berlin, 2010, pp. 127–163.
[41] D. Lorenz, On-going change in English modality: emancipation through

frequency, Zeitschrift für Literaturwissenschaft und Linguistik 42 (2012) 35–50.
[42] I. Lowe, Conditional clauses: their information status and discourse function, in: S.J.J. Hwang, W.R. Merrifield (Eds.), Language in Context: Essays for Robert E. Longacre, the Summer Institute of Linguistics, Dallas, TX, 1992, pp. 339–358.
[43] S. Makino, M. Tsutusi, A Dictionary of Basic Japanese Grammar, The Japan Times, Tokyo, 1986.
[44] E.S. Martin, A Reference Grammar of Japanese, Yale University Press, New Haven, 1975.
[45] Y. Matsumoto, From bound grammatical markers to free discourse markers: history of some Japanese connectives, in: Proceedings of the Fourteenth Annual Meeting of the Berkeley Linguistics Society, 1988, pp. 340–351.
[46] S. Miyauchi, "Ga"/"keredo" rui o kōsei yōso to suru setsuzokushi no hattatsu ni tsuite: kinsei goki Edogo/Meijiki Tōkyōgo ni okeru suii, in: K. Kobayashi, C. Kobayashi (Eds.), Nihongoshi no shin shiten to gendai nihongo, Bensei Shuppan, Tokyo, 2014.
[47] J. Mori, Historical change of the Japanese connective datte: its form and functions, in: N. Akatsuka, S. Iwasaki, S. Strauss (Eds.), Japanese/Korean Linguistics, vol. 5, Center Study Language & Information, Stanford, CA, 1996, pp. 201–218.
[48] J. Mori, Studies in Discourse and Grammar: Negotiating Agreement and Disagreement in Japanese: Connective Expressions and Turn Construction, John Benjamin, Philadelphia, PA, 1999.
[49] M. Nakano, A. Maeda, K. Jibō, Shinpen nihon koten bungaku zenshū: sharebon kokkeibon nijōbon, vol. 80, Shōgakkan, Tokyo, 2000.
[50] NKD. (Ed.) (2000) (2nd ed.). Tokyo: Shogakkan.
[51] T. Okimori, Hajimete Yomu Nihongo No Rekishi, Beret Publisher, Tokyo, 2010.
[52] T. Ono, R. Suzuki, Situating usage-based (Japanese) linguistics, in: K. Kabata, T. Ono (Eds.), Usage-based Approaches to Japanese grammar, John Benjamins, Amsterdam, 2014, pp. 1–9.
[53] M. Onodera, Setsuzokushi "dakara" no goyōron-teki bunseki: kanrenseiron kara, Takushoku Daigaku Nihongo Kiyō 14 (2004a) 27–36.
[54] N.O. Onodera, Japanese Discourse Markers: Synchronic and Diachornic Discourse Analysis, John Benjamins, Philadelphia, PA, 2004b.
[55] N.O. Onodera, Setting up a mental space: a function of discourse markers at the left periphery (LP) and some observations about LP and RP in Japanese, in: K. Beeching (Ed.), Discourse functions at the left and Right periphery: Cross-linguistic Investigations of language Use and language Change, Brill, Leiden, Netherlands, 2014, pp. 92–116.
[56] H. Pichler, The functional and social reality of discourse variants in a northern English dialect: I DON'T KNOW and I DON'T THINK compared, Intercultural Pragmat. 6 (4) (2009) 561–596.
[57] H. Pichler, The Structure of Discourse-pragmatic Variation, John Benjamin Publishing, Amsterdam, 2013.
[58] H. Pichler, S. Levey, In search of grammaticalization in synchronic dialect data: general extenders in northeast England, Engl. Lang. Linguist. 15 (3) (2011) 441–471.
[59] C. Rühlemann, Conversation in Context, Continuum, New York, 2007.
[60] M. Sadler, Iconically motivated use of the Japanese discourse markers sorede, nde, and de in conversation, Southwest J. Linguist. 20 (2) (2001) 143–161.
[61] M. Sadler, A blurring of categorization: the Japanese connective de in spontaneous conversation, Discourse Stud. 8 (2) (2006) 303–323.
[62] E.A. Schegloff, H. Sacks, Opening up closings, Semiotica 8 (4) (1973) 289–327.
[63] D. Schiffrin, Discourse Markers, Cambridge University Press, New York, 1987.
[64] J.R. Searle, A taxonomy of illocutionary acts, in: K. Gunderson (Ed.), Language, Mind and Knowledge, University of Minnesota Press, Minneapolis, MN, 1975.
[65] M. Shibatani, The Languages of Japan, Cambridge University Press, Cambridge, 1990.
[66] E. Sweetser, From Etymology to Pragmatics: Metaphorical and Cultural Aspects of Semantic Structure, Cambridge University Press, New York, 1990.
[67] I. Taavitsainen, S. Fitzmaurice, Historical pragmatics: what it is and how to do it, in: S. Fitzmaurice, I. Taavitsainen (Eds.), Methods in historical pragmatics, Mouton de Gruyter, Berlin, 2007, pp. 11–36.
[68] I. Taavitsainen, A.H. Jucker, Trends and developments in historical pragmatics, in: A.H. Jucker, I. Taavitsainen (Eds.), Historical pragmatics, De Gruyter Mouton, Berline, 2010, pp. 1–30.
[69] H. Takada, M. Shiina, N. Onodera, Rekishi goyōron no kiso chishiki, in: H. Takada, M. Shiina, N.O. Onodera (Eds.), Rekishi goyōron nyūmon: kako no komyunikēshon o fukugen suru, 2011, pp. 5–44.
[70] T. Takami, A study on closing sections of Japanese telephone conversations, Work. Pap. Educ. Linguist. 18 (2002) 67–85.
[71] M. Tanahashi, K. Suzuki, O. Uda (Eds.), Shinpen nihon koten bungaku zenshū: kibyōshi senryū kyōka, Shōgakkan, Tokyo, 1999.
[72] A. Tanaka, Setsuzoku-shi no sho-mondai: sono seiritsu to kinō, in: K. Suzuki, Ō. Hayashi (Eds.), Kenkyū Shiryō Nihon Bunpō 4, Meiji Sho'in, Tokyo, 1984, pp. 81–123.
[73] E.C. Traugott, Subjectification in grammticalisation, in: D. Stein, S. Wright (Eds.), Subjectivity and subjectivisation: linguistic perspective, Cambridge University Press, Cambridge, 1995, pp. 31–54.
[74] E.C. Traugott, R.B. Dasher, Regularity in Semantic Change, Cambridge University Press, Cambridge, 2002.
[75] T. Tsukahara, -ba, in: A. Matsumura (Ed.), Kotengo Gendaigo Joshi jodōshi shōsetsu, fifth ed., Gakutōsha, Tokyo, 1984, pp. 389–394.
[76] N. Twine, Language and the Modern State: the Reform of Written Japanese, Routledge, New York, 1991.
[77] T.A. van Dijk, Text and Context: Explorations in the Semantics and Pragmatics of Discourse, Longman, London, 1977.
[78] T.A. van Dijk, Pragmatic connectives, J. Pragmat. 3 (1979) 447–456.
[79] M. Yajima, Jikanteki/kūkanteki hikaku o jiku ni shita kinse-go bunpōshi kenkyū: soredakara-rui no goi-ka o rei to shite, in: H. Kanazawa, M. Yajima (Eds.), Kinsego kenkyū no pāsupekuthibu gengobunka o dō toraeru ka, Kasama Shoin, Tokyo, 2011, pp. 56–82.
[80] M. Yajima, Kamigata ōsakago ni okeru jōken hyōgen no shiteki tenkai, Kasama Shoin, Tokyo, 2013.
[81] K. Yuzawa, Zotei edo kotoba no kenkyu, third ed., Meiji Shoin, Tokyo, 1991.